OBJECTIVES: Insulin degludec (IDeg) is a basal insulin with an ultra-long duration of action for management of patients with type 1 (T1DM) and patients with type 2 (T2DM) diabetes. IDeg has demonstrated efficacious blood glucose control, with less hypoglycaemic events, and with an option for flexibility in dose time, compared with insulin glargine (IGlar). The objective was to assess the cost-effectiveness of IDeg in Belgium, compared with IGlar. The analysis focused on patients in three treatment regimens: T1DM, T2DM treated with basal insulin in combination with oral anti-diabetics (BOT) and T2DM treated with basal-bolus (BB). **METHODS:** A one-year cost-utility model driven by differences in hypoglycaemia was used. Published dis-utilities for hypoglycaemic events were multiplied by the rate of hypoglycaemia to calculate quality-adjusted life years (QALYs). Costs and utilities were also calculated for potential use of less blood glucose test strips. A utility gain was attributed to the additional benefit of dosing flexibility. Unit costs pertained to public tariffs and reflected the payer perspective in Belgium. Baseline incidence rates of hypoglycaemic events and related resource utilization pertained to a Belgian patient-reported outcomes study. Hospitalization costs following severe hypoglycaemia were estimated using the IMS Hospital Disease Database. **RESULTS:** IDeg was associated with an incremental cost-effectiveness ratio of 14,677€/QALY in T1DM, 4,976€/QALY in T2DM BOT, and 12,930€/QALY in T2DM BB. Univariate and probabilistic sensitivity analyses confirmed robust results. Results were most sensitive to variations in number of IGlar doses per day, and number of glucose-monitoring tests. At a willingness to pay threshold of 30,000€/QALY, IDeg would be cost-effective in 54%, 100% and 93% of the cases in the T1DM, T2DM BOT or T2DM BB treatment regimens respectively. **CONCLUSIONS:** These analyses demonstrate that IDeg is cost-effective in Belgium, when used in patients with T1DM and T2DM currently treated with long-acting insulin analogues.

PDB67

ECONOMIC EVALUATION OF LIRAGLUTIDE FOR TREATMENT OF TYPE 2 DIABETES MELLITUS IN THE RUSSIAN FEDERATION

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OBJECTIVES: The analysis goal is to determine the cost-effectiveness of liraglutide as add-on to metformin in for patients with type 2 diabetes in condition of the Russian health care system. Total medical expenses and effectiveness in terms of QALY are compared for liraglutide, glimepiride and rosiglitazone, all in combination with metformin, and metformin monotherapy. **METHODS:** Data were sourced from a clinical trial comparing liraglutide vs. glimepiride (in combination with metformin), and a clinical trial comparing liraglutide vs. rosiglitazone (as add-on to metformin). From them data on clinical effectiveness in form of impact on HbA1(c), body mass index and blood pressure are extracted. Utility values are mostly taken from the UK Prospective Diabetes Studies supplemented with other published sources. The analysis is conducted from the perspective of the Russian health care system. Respectively the cost of the following resources is accounted: comparing of alternatives, concomitant pharmacotherapy, cost of medical manipulation, cost of ambulatory visits. Both future costs and clinical benefits are discounted at 3 percent. Sensitivity analysis is performed. Results of this analysis are shown in the incremental cost-utility rate (ICUR). **RESULTS:** The data of the analysis illustrates that liraglutide therapy for type 2 diabetes patients provides a significant health improvement from the perspective of quality adjusted life-years. Simultaneously liraglutide demonstrates better cost-effectiveness than the compared alternatives. The ICUR index of 1.2 mg liraglutide in combination with metformin equal to 1 348368 rub, 1 161874 rub and 537331 rub for QALY in comparison with metformin monotherapy, glimepiride and rosiglitazone, both in combination with metformin, respectively. **CONCLUSIONS:** Liraglutide has turned to be cost-effective therapeutic alternative for treatment of type 2 diabetes in adult patients in conditions of Russian health care system over a 10-year time horizon.

PDB68

ECONOMIC EVALUATION OF SITAGLIPTIN IN DIABETES MELLITUS TREATMENT IN CHINA

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OBJECTIVES: To evaluate the long-term cost effectiveness of sitagliptin compared to glimepiride and acarbose in the treatment of type 2 diabetes mellitus in China. **METHODS:** Sitagliptin, as add-on therapy to metformin, was compared to glimepiride and acarbose, and as monotherapy was also compared to acarbose. The validated UKPDS Outcomes Model was used to estimate the direct medical costs and outcomes (life years and QALYs gained). The demographic characteristics and clinical data were taken from published literature. The quality of life data was obtained from published literature and re-confirmed through a questionnaire survey from a clinical expert panel of 20 diabetes specialists. The cost of drugs was calculated based on government guidance price or actual market price. The annual cost of complications was estimated based on expert opinions. Patients' outcomes were modeled for 40 years and incremental cost-effectiveness ratios were calculated. Both future costs and clinical benefits were discounted at 3 percent. A probabilistic sensitivity analysis was performed to understand the key drivers and general sensitivity of the model. **RESULTS:** The results showed that, compared to the treatment of glimepiride and acarbose plus metformin therapy, the add-on of sitagliptin provided a gain of 0.02 and 0.95 QALYs per patient, and the incremental cost-effectiveness ratios were USD 9,470 and USD 399, respectively. The results also showed that compared to acarbose monotherapy (100mg t.i.d and 200mg t.i.d), the sitagliptin monotherapy (100mg/d and 200mg/d) was dominant, with higher QALYs (0.58 and 0.92) and years of life (0.72 and 1.23) gained and lower cost (USD 90 and USD 185). **CONCLUSIONS:** According to the China's GDP per capita in 2011 (USD 5,674), the results demonstrate that sitagliptin is more cost-effective than glimepiride and acarbose in the treatment of diabetes mellitus in China.

PDB69

PRODUCTIVITY LOSS IN POPULATION OF INFORMAL CAREGIVERS TO DIABETIC FOOT SYNDROME PATIENTS IN POLAND

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OBJECTIVES: Foot ulceration is a major cause of disability in diabetic patients. Disability of patients with diabetic foot ulceration (DFS – Diabetic Foot Syndrome) concerns not only patients themselves, but also the informal caregivers, mainly their close relatives. The aim of this study was to estimate lost productivity in a population of family caregivers of patients with diabetic foot ulceration in Poland. **METHODS:** A survey among 189 patients with DFS (treated in ambulatory care) and their families was conducted. To assess the impact of diabetic ulceration on productivity of caregivers to DFS patients the modified questionnaire WPAI-CG was used. The PEDIS scale was used to classify severity of ulceration. **RESULTS:** A total of 116 out of 189 questionnaires were collected, and data on 93 responders (25 males) were included in the analysis (23 questionnaires were returned empty or concluded that informal care is not provided to DFS patients). Fifty-two (13 males) out of 93 caregivers were employed at the time of the survey. Mean age of the population of caregivers was 45.9±11.2 years. Most were close relatives of DFS patients (58% spouses, 27% children). Almost half caregivers were employed in private sector (46%). Most had higher (50%) or secondary (48%) education. The average weekly work time declared was 40.4±13.1 hours. Approximately 70% of caregivers were urban population. The average percentage of work time missed and the percentage of working impairment while working due to informal care of DFS patients were estimated at 11.9% and 25.0%, respectively. The percentage of overall work impairment due to informal care of DFS patients was 32.2%. This amounts to weekly average time of the absence of 13.0 hours. **CONCLUSIONS:** The lost productivity due to informal care on DFS patients is substantial and may have important implications for the economy.

PDB70

UTILISATION PATTERN OF GLP-1 AGONISTS IN COMBINATION WITH BASAL INSULIN IN PATIENTS WITH T2DM IN THE NORWEGIAN SETTING IN ONE YEAR

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OBJECTIVES: GLP-1 agonists in combination with basal insulin (BI) have demonstrated additional improvement of glycemic control in uncontrolled T2DM patients in clinical trials. It is therefore important to assess the real-world utilisation of GLP-1 agonists in combination with BI in T2DM patients. **METHODS:** Retrospective cohort analysis (2010 to 2012) to assess GLP-1 agonist utilisation in T2DM patients based on the Norwegian Institute of Public Health Prescription Database (NorPD). Both ICPC=T90 and ICD-10=E11 were applied to identify T2DM patients. Patients who had ≥2 GLP-1 dispensed within 6-month in Year-2011, with 1-year pre-Baseline/post- Follow-up GLP-1 initiation were included in the analysis. Baseline anti-diabetic drug use and combination use of GLP-1 and BI at Follow-up were also assessed. **RESULTS:** Of the 1,500 GLP-1 initiators identified (mean age=57; 52% male) at Baseline, 77% were on OADs, 19% on BI, 2% on prandial insulin (no BI) and 2% on other/no anti-diabetic drug. During 1-year Follow-up of GLP-1 adding on OADs patient population, 56% used GLP-1 continuously including 50% who used GLP-1 alone and 6% added BI. In total, 15% had either combined with or switched to BI, 4 months after the first GLP-1 was dispensed. Of those GLP-adding on BI patient population, 53% continuously used GLP-1 including 26% had both GLP-1 and BI dispensed throughout the Follow-up. About 52% had either BI interrupted or discontinued approximately 2 months after the first GLP-1 was dispensed. In total, 27% had insulin bolus dispensed; of which 58% either interrupted or discontinued GLP-1. **CONCLUSIONS:** About 1/3 of GLP-1 initiators were in combination with BI. In BI treated T2DM patients >25% remained on both GLP-1 and BI, while another >25% required treatment augmentation or switched to bolus. The data suggests an unmet treatment need, particularly in T2DM patients treated with BI.

PDB71

REVIEW OF COST OF DIABETES COMPLICATIONS IN FOUR EUROPEAN COUNTRIES

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OBJECTIVES: To provide a comprehensive and coherent reference document of published cost data for diabetic complications in France, Germany, Italy and Spain for use in economic diabetes modeling. **METHODS:** A search for published cost of diabetes complications data from a health care payer perspective was performed on government websites, in peer-reviewed journals and local cost experts. All costs were inflated to 2013 Euros (€). **RESULTS:** First year costs of myocardial infarction varied between €3,041 in France and €9,690 in Germany. Heart failure costs were similar across countries: €3,104 in France; €2,791 in Germany; €4,000 in Italy and €3,316 in Spain. Costs of non-fatal stroke were higher in Germany (€16,441) than in other countries (Spain €8,016; Italy €6,073; France €5,447). Everywhere, the cost of haemodialysis was higher than peritoneal dialysis €35,972 versus €21,255 in Spain, €21,552 versus €18,485 in Italy, €34,290 versus €34,069 in Germany €71,683 versus €48,752 in France. Renal transplant cost was estimated to €84,114 in France, €34,858 in Germany, €38,528 in Italy and €26,618 in Spain. The cost of a major hypoglycemia requiring medical care was €4,275 in Spain, €2,561 in Germany, €1,391 in Italy and €1,165 in France. Neuropathy complication costs varied widely: €3,808 (France); €16,762 (Germany); €4,290 (Italy); and €5,330 (Spain) for foot ulcers and €6,056 (Italy); €7,754 (Germany); €9,578 (France); and €12,118 (Spain) for lower-extremity amputation. **CONCLUSIONS:** This study provides a coherent set of costs for diabetes complications in four European countries. Due to the differences in health care